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Supplier Relationship Management in the Aviation Industry of Finland

Case: Helsinki Airport

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The rapid globalization of worldwide economies, stiff competitive market places, and proactive shareholders has pressed organizations and businesses to reinvent the wheel when it comes to doing business. Currently, the trend is leaning more towards emphasis on supplier relationship management in ways that companies depend on existing relationships for survival or to establish a competitive edge. The aviation industry is no exception and much like any other industry supplier alliances and partnerships between airlines are used to combat consolidation and globalization.

The purpose of this study was to investigate a relationship in the aviation industry formed between two separate entities operating out of Helsinki-Vantaa Airport in Finland. The research intended to identify the type of relationship formed and the reasons behind its existence and maintenance. Furthermore, the operational performances as a result of the relationship were analysed from old and new monitoring systems. The methodology for the research was a perspective and deductive approach. The empirical data of the study was collected through informal and formal observations made during meetings and negotiations with companies at HEL airport along with analysis of company data and theoretical background understanding.

The supplier relationship established between companies at HEL airport was confirmed to be cooperate as defined by its characteristics. The main drivers for the relationship focus on the quality improvements, cost reduction, and maximizing resources and capacity at a local level. The cooperative relationship with key suppliers lead to improved business performances which were defined and measured as either being operational or financial. A significant improvement in operational performances was achieved creating reduced costs and improved service quality levels. The benefits of the operational performances were also enclosed in the financial performances of the companies stemming from cost reduction and allowing for an increase in revenues.

Keywords	Air freight, SRM, Performance, Quality, IATA

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Abbreviations

A2A	Airport to Airport
ARR	Flight Arrival
AWB	Air Waybills
BQA	Booking Quality Assurance
B-M	Bonus-Malus
C2K	Cargo 2000
DEP	Flight Departure
DLV	Shipment Delivered
EDI	Electronic Data Interchange
FAP	Flown as Planned
FTKO	Freight Tonne – Kilometres
FWB	Electronic
GHA	Ground Handling Agents
GSA	General Sales Agents
HWAB	House Air Waybills
IATA	International Air Transport Association
KPI	Key Performance Indicators
LAT	latest time of acceptance
LF	Load Factor
MAWB	Master Air Waybill
MOP	Master Operating Plan
MRO	Maintenance, Repair, Operations
NFD	Notification of the Consignee
RCF	Received from Flight
RCS	Shipment Received from Forwarder
RFS	Road Feeder Service
SGHA	Standard Ground Handling Agreement
SLA	Service Level Agreement
SQS	Supplier Quality Sheet
SRM	Supplier Relationship Management
STD	Scheduled Time of Departure
TOA	Time of Availability
ULD	Unit Loading Device

Introduction

This thesis is based on a relationship and working partnership between airline companies in the aviation industry. The purpose of the study is to analyse performance monitoring systems and how the supplier relationship is affected between both companies. Due to the confidential nature of the information involved for this study the companies are referred to as Company A and Company B.

The aviation industry is one of the most robust markets in the world's economy. It's an industry that has undergone remarkable resilience facing many familiar and persistent ecological and socio impacts. The aviation industry is renowned for its ongoing battle with cost reductions, volatile demand, quality constraints, and the ability to maintain excellent service levels for a variety of consumer groups (strategyand.pwc.com, 2015). Given today's streamlined economies it is becoming more apparent to pay close attention to budget and resources. Due to this, the aviation industry has followed the trend of globalization and consolidation much like other industries. This is achieved by alliances and partnerships between airlines allowing to extend networks, customer reach, and consolidate resources (Britton, 2011).

Partnerships and alliances in the aviation industry have allowed for airline companies to become far more efficient and competitive. Airline alliances exist for a number of reasons, predominately these partnerships benefit from economies of scope and help to alleviate government regulation while remaining independent companies (strategyand.pw.com 2016). The importance of cooperation illustrates how significant the quality and type of services between airline carriers can be. Many partnerships in the aviation industry have implemented service level agreements in order to uphold and maintain service quality. Briefly, a service level agreement is defined as a contract between a service provider and a customer.

Service level agreements and partnerships may vary depending on the services needed and offered between air carriers. Generally, air carriers offer a diverse selection of services including different handling processes all related to transportation of people and cargo. In the aviation industry there are several parties involved. This means the

utilization of a service level agreement is mandatory when multiple air carriers are present. As mentioned, air carriers may provide a variety of services, which may include acting as ground handling agents (GHA) and general sales agents (GSA). In order to ensure high level of quality and meet the aviation industry specific standards and local regulations, it is important to design the handling processes around a sufficient performance monitoring system. This may occur between any of the different ground handling agents, general sales agents, and airline companies operating at the airports as presented in figure 1.

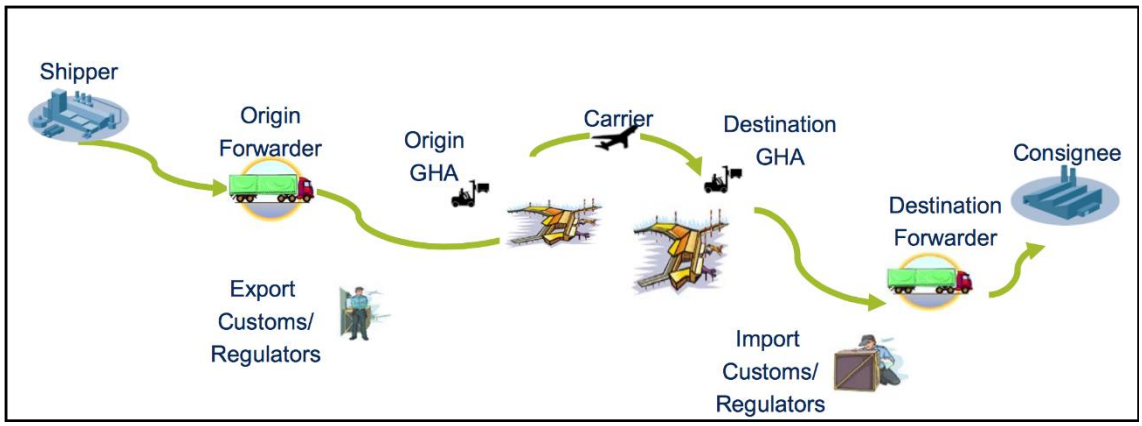


Figure 1. Air Freight Overview (Logistiikanmaailma.fi, 2008)

Company A and B have a strategic alliance in the aviation industry. The partnership between both companies extends beyond Finland and they have cooperating efforts in more than 56 airports worldwide. However, services may vary from airport to airport depending on the necessity and situation. As of August 2016, Company A and B wanted to promote a more sustainable relationship worldwide by restructuring and revaluating their supplier relationship management (SRM). The target of this supplier relationship is to build and improve existing relationships in order to ensure a resilient cooperative future within the aviation industry (Company A, 2016).

At HEL airport Company A is an airline carrier and Company B is a Ground Handling Agent (GHA). Company A purchases ground handling services from Company B under a service level agreement which outlines the performance monitoring of the services provided by Company B. The current monitoring is measured monthly based on a number of local and aviation standards. However, both Companies at HEL airport agreed that performance monitoring could be improved upon overall through a suppler

relationship analysis. Furthermore, a set of standards for benchmarking combined with already in place practices was desirable to be developed and verified as to how to achieve any future supplier relationship objectives.

1.1 Case Companies

1.1.1 Company A – Air Carrier

Company A is a global aviation group with a total of 540 subsidiaries and equity investments, which, since 2015 consists of different segments within the passenger airline group, logistics, MRO (maintenance, repair, operations), and catering. To a certain extent, each segment commands a prominent position in their respective markets. Company A is comprised of 18 air freight orientated companies. Collectively these companies provide a variety of destinations, capacities, products and services that all serve to supplement each other. Company A is an operational equity shareholder owing a variety of stakes in various aviation cargo services. Company A has a rather extensive network around the world with more than 300 destinations in over 100 countries (Company A, 2016).

Currently, Company A has well over 4500 employees worldwide, 2.442 billion Euros generated in sales revenue, and a total of 77 million Euros in operating capital. Company A is an industry leader with a diverse fleet of aircrafts at their disposal. Close to 54 % of total Company A's air freight is transported on freighters or through the capacities of other partnering airlines. The remaining 46% of total Company A air freight is transported using the belly capacities of passenger aircrafts and partnering airline passenger aircrafts. Additionally, Company A offers capacities available through a road feeder service (RFS) network which helps to transport more complicated shipments in inaccessible areas. This service primarily focuses on the airport-to-airport commerce with the main customers generally being forwarding agencies.

All functions of Company A including sales, sales steering, handling, and marketing are centralized and decentralized. Essentially, the organizational structure is broken down regionally with a strong cooperation with headquarters in Frankfurt. Finland belongs to

STO FG region which is headquartered from Stockholm, Sweden. STO FG can be further divided into local branches which are led by acting country managers for Copenhagen (CPH), Helsinki (HEL), Norway (OSL), and Sweden (STO) as shown in figure 2. Baltic countries including Estonia (TLL), Latvia (RIX), and Lithuania (VNO) belong to Finland HEL FG/A region. The same applies for Iceland (KEF), which belong to Denmark CPH FG/A region.

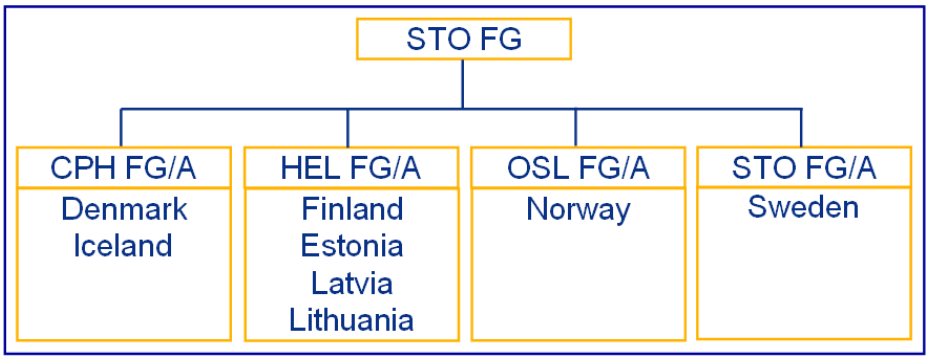


Figure 2. STO internal hierarchy chart (Company A, 2008)

1.1.2 Company B – Ground Handling Agent

Company B is acclaimed to be one of the world's largest providers of ground and cargo handling services within the aviation industry. The Company offers services for more than 800 client based companies. Cargo handling is done for nearly 230 million passengers worldwide from around 4 million flights per year. The Company transports approximately 4.1 million tons of cargo operating in and out of around 120 warehouses globally. Company B is present at over 279 airports in 48 different countries spread over five vast continents. The Company has around 61,000 employees and all this produces an annual consolidated operating profit of roughly 2.75 billion €. Currently, Company B is renowned within the industry as one of the largest independent ground service providers with the highest number of low-cost carrier operations and hubs around the world. Company B provides cargo ramp and passenger ramp ground handling services in over 190 airports around the globe serving more than 224 million passengers on average annually. Company B is advantageous with its ability to facilitate proficiency from its many operating airports which is a big contributor to the overall success of the Company (Company B. 2016)

1.2 Objectives and Research questions

The main objective of this study is to investigate the relationship that exists between Company A and Company B and furthermore to establish the reasoning behind such a relationship. The researcher of this thesis and the companies involved also wanted to know how the relationship lead to improved business performance. An improved monitoring tool will help to evaluate the service provider and help to identify areas for improvement. The scope of the project will focus only on the relationship and operations at HEL airport.

The research questions for this study can be formulated as the following:

1. **What type of supplier relationship exists between Company A and B and what are the reasons for such a relationship?**

2. **In what ways has the established supplier relationship improved business performance for companies A and B?**

In order to sufficiently answer these research questions the thesis will explore the theoretical framework of supplier relationship management from literature. This framework will provide reasons, benefits, and challenges for the supplier relationship between Company A and B at HEL airport. This study aims to help Company A and B at HEL airport to maximize full operational capacity in terms of IT and service capabilities. This is achievable through the analysis of the performance monitoring system, new and old, implemented between Company A and B. The research of the thesis may act as a model on the implementation of similar types of monitoring performance systems of airfreight services in the aviation industry. As a result, the thesis will provide a general overview of the aviation industry while simultaneously provide valuable insight into the unique nature of airfreight specific processes.

The structure of this thesis is compiled into 7 separate sections. Section 1 is the introduction which includes company background, challenges, and research questions. Section 2 deals with the methodology and design of the research for the study. Section 3 provides background information about the aviation industry and identifies key

suppliers. Section 4 covers the theoretical frameworks presented from the literature overview. Section 5 is a current state of affairs overview of companies A and B. Section 6 presents the result of the study along with data analysis. Section 7 is the conclusion of the study which also includes suggestions from further research.

2 Methodology

The methodology aims at providing the best research approach in order to draw conclusions and provide companies A and B practical SRM solutions. Before disclosing the projected methodology, a narrow definition of research methods will be clarified to better help understand the overall methodology intended for this thesis. A research method can be defined as: "*…a tool or technique or approach for collecting and collating data.*" (Buchanan & Bryman 2009).

2.1 Methodology Overview

Based on the Yin's (2014) opinion, researching can be conducted in five different mannerisms including the following: case study, experiment, survey, historical research, or an analysis of records. For the purpose of this thesis, the case study methodology is the most appropriate. By utilizing a case study methodology the research aims at addressing any descriptive or explanatory questions (Yin 2009). The case study will aid the research in understanding complex phenomenas and to investigate any relevant real-life events (Yin 2014). The case study becomes an empirical investigation that focuses on the relationship between companies A and B comprehensively within a practical context.

As this thesis explores the supplier relationship of the companies at HEL airport, the case study methodology is the most appropriate to enable the researcher to explore, understand, and describe just how the supplier relationship leads to improvement in business performance. According to Yin (2004), the case study is the most effective and relevant when the researcher has no control on the study. The case study can be functional in many different ways for the research helping to back information gained from individuals, groups, organizations, social, and political singularities. Case studies

offer dynamic understanding of an isolated environment making it efficient at finding and prescribing new processes and behaviours not yet understood (Yin 2003).

2.2 Data Collection

The data collected for research can be deduced into two types, either primary or secondary. These forms of research are based on the familiarity of the data to the actual recording of the event. Primary data is data that is nearest to the truth as it is based on information from observations, experiences, and recordings of an event. According to Ghauri and Grønhaug (2010), primary data is information that is collected for the purpose of the research and must be contingent with the objectives of the study. The secondary data may be referred to as any data obtained through documented information from journals, articles, or other forms of publications. The importance of the secondary data shows ways to find information for research but also aids in explaining and understanding the research problem (Ghauri and Grønhaug 2010). This will highlight the significance of any literature reviews during research.

Data can be described from two different categorical groups based on their characteristics. Either data is summarised from figures or presented using words. Data that is presented statistically is called quantitative and data that includes opinions, ideas, theories, etc. which are not deduced from numbers are called qualitative data. The thesis will investigate the relationship between Company A and B and it is suggested by Buchanan & Bryman (2009) that all organizational research methods should focus on qualitative research and methodology.

Data collection for any style of case study can be performed in a number of different ways including documentation, archival records, interviews, direct observations, participant observations and physical objects (Yin 2014). Based on the research collected for this study, some of the most important sources of data came from direct observation, and participant observations done by the researcher of the thesis followed by an analysis of qualitative and quantitative material provided by the companies. The qualitative research of the thesis will be defined as a type of research that creates results based on the organizational experiences and descriptive observations. This type of research will

help to promote concepts, understanding, and insight based on drawing conclusions from data (Taylor 2016).

For this study, both primary and secondary data collection proved to be very beneficial. Primary data consisted of direct and participant observations along with analysis of company data and material. These observations were done during a series of discussions and meetings during the months of September – December 2016 in which the researcher participated in as seen in table 1. The documentation was done by the researcher in the form of field notes. Direct observations have their strengths and weaknesses. Strengths include all the events that unfold which can be recorded for in real-time contextually. Weaknesses might be the cost of human resources including the selectivity and sensitivity of the observations. (Yin 2003). The research also called for the use of secondary data from different forms of literature such as articles, journals, and books. This data was greatly supportive when developing the theoretical background for the analysis.

Table 1. Company Discussions and Meetings

Date	Type	Company A	Company B	Duration	Topics
19.9.16	Discussion	Regional Manager	-	**30 min**	SLA revision SRM intro
28.9.16	Meeting	Regional Manager Handling Intern	Processes Handling Director Team memebers	**2 hrs**	SLA revision SRM presentation & intro
27.10.16	Meeting	Regional Manager Handling Intern	Processes Handling Director Team memebers	**2 hrs**	SRM-SQS Monitoring tool review KPI's indentified (standard & local) SQS ready for OCT Pilot
24.11.16	Meeting	Regional Manager Handling Intern	Processes Handling Director Team memebers	**2 hrs**	SRM-SQS monitoring analyzed for OCT SQS Excel template modified SQS ready for NOV launch
14.12.16	Meeting	Regional Manager Handling Intern	Processes Handling Director Team memebers	**3 hrs**	SRM-SQS monitoring analzyed for NOV Final SQS excel edit

2.3 Analysis

Following the data collection process of the research, an analysis was conducted in order to provide sufficient claims for a case study. The analysis was done to clarify whether the means of the study were justified and that all aspects of the study were covered. The purpose of the analysis was to understand and find insight for all data collected.

Thus, the analysis becomes a way to structure, order, and provide substance for the data collected. Yin (2009) described different ways in carrying out data analysis for case studies which include pattern matching, explanation building, and replication logic. The data was applied and reviewed based on explanation-building and pattern-matching. The technique used in the case study are explained below.

1. ***Pattern Matching***

   This method of analysis allows for the researcher to compare empirical patterns based on the data collection using projected patterns anticipated before the case study.

2. ***Explanation Building***

   This method of analysis may be implemented when the research begins with any style of open-ended research questions that need answers and explanations.

Alongside the different methods of data analysis, the researcher of this thesis created a theoretical model. The theoretical model presented in figure 3 was created to provide structure according to the following sections. The model helps to clearly identify the objectives of each research questions. The left side of the vertical dotted line pertains to research question 1. The right side for the vertical dotted line pertains to research question 2. The yellow rounded boxes encase companies A and B. The red oval represents the supplier relationship between both entities. There are different types of supplier relationships, which were identified and assessed. The blue rounded box encases business performance, which is contingent on the supplier relationship between Company A and B. Business performance was evaluated to assess its function for the supplier relationship.

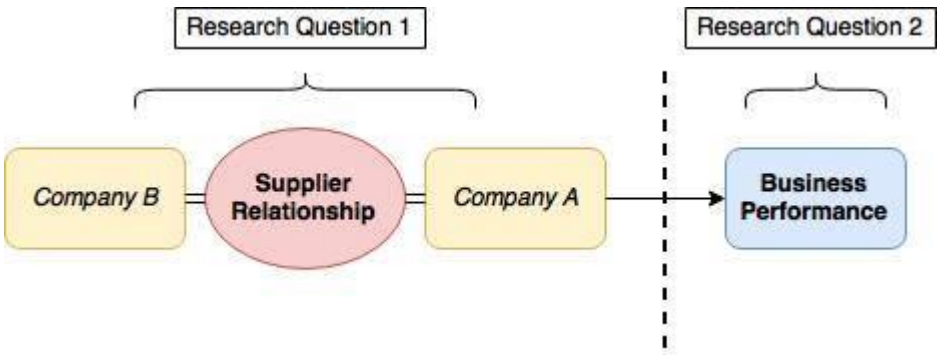


Figure 3. Researcher's Theoretical Model

3 Air Freight Supply Chain and Operations

Given the context of the thesis regarding air freight processes and the role of Company A and B, is imperative to sufficiently outline the structure of the aviation industry regarding air freight. The purpose of this will identify all parties involved during the transportation of cargo from origin to point of destination and all in between. Air freight supply chains revolve around the movement of consignments from origin to destination. This movement is often complex and will undergo an array of different regulations and processes, this is especially true when cargo is being transported internationally by air.

The physical cargo of air freight can be unusual and diverse in terms of its characteristics. Generally, cargo can be delivered to just about anywhere around the world as most goods are being sent from a seller to buyer or forwarded from a consignor to consignee. Cargo comes in a variety of forms including personal belongings, gifts, merchandise, product samples, machinery or equipment, and even live animals. Regardless of the cargo in question, air freight will be handled, processed, and passed along the chain between a number of different entities all of which having varied responsibilities. The air freight supply chain will include air carriers and operators, postal couriers, consignors, consignees, regulation agents, and ground handling agents. All entities involved are separate and have different operating names depending on the country or region of origin (Sales, 2016).

3.1 Roles and Responsibilities

The air freight supply chain contains multiple players and it is important to identify how these entities interact with one another. The intent would be to identify the important suppliers relevant to HEL airport concerning this research and to help to show the elements involved when transporting cargo via air. It is possible that a single supplier along the supply chain can assume more than one role or responsibility during this transport.

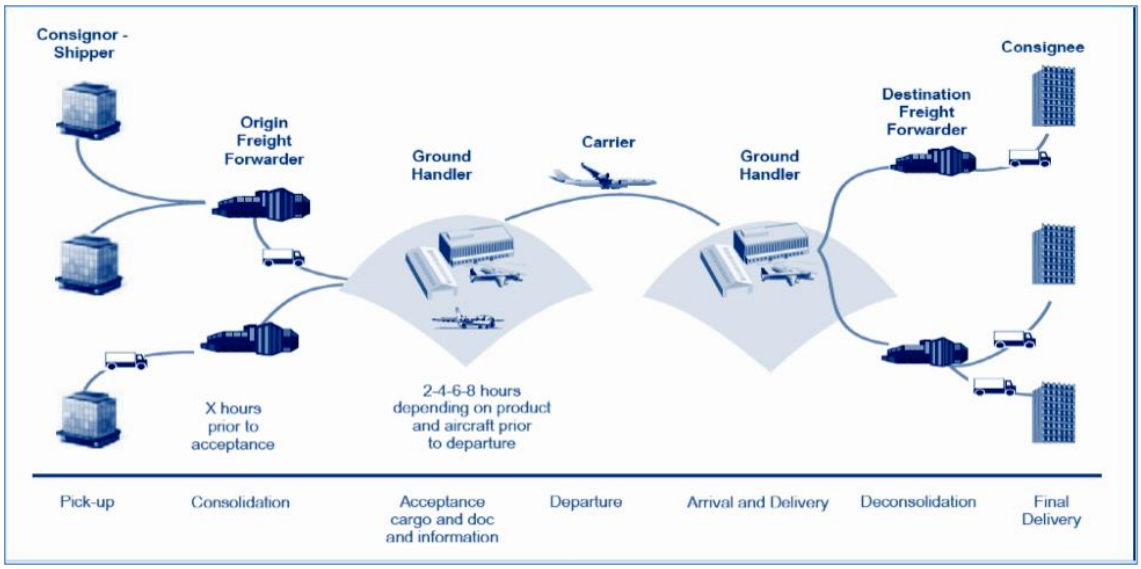


Figure 4. Air Cargo Movement Overview (ICAO Report, 2013)

Consignor

The consignor is the party which begins the initial movement during the transportation of goods starting from point of origin which is represented in figure 4. The consignor is commonly referred to as the sender. In some situations a consignor can be accepted to meet certain security requirements in which case they are deemed as 'know consignor'. Often times a shipper and a consignor may be considered to be the same thing. However, this is not the case and they differ because a shipper will initiate the trade of goods instead of the actual movement. Consignor and shipper assume separate roles but can be the same Company (ICAO.int, 2013)

Consignee

A consignee is the counterpart to the consignor. It is the party which is located at the destination and is entitled to receive the cargo as represented in figure 4. The consignee is noted on the invoice and or packing list (ICAO.int, 2013).

Freight Forwarder

A freight forwarder is an essential role in the air freight supply chain. Their main responsibility includes the arrangement of various air shipments to be forwarded to air carriers when ready. In many cases various shipments are placed into what is known as a 'consolidation'. A cargo consolidation allows for the freight forwarder to gather numerous smaller shipments before forwarding to the air carrier in order to obtain a

better freight rate and increase security of the overall shipment. The freight forwarder may combine services with the logistics provider in order to provide preparation, stowage, carriage and delivery of the shipment (ICAO.int, 2013).

The freight forwarder will organize multiple carriages, which can sometimes include multimodal transportation. This happens when air carrier providers are coupled with sea, rail, or truck from the shipper to the airport of departure at point of origin and the same at destination to consignee as represented in figure 4. Other services provided by the freight forwarder also include storage, handling, packaging, and distribution of the cargo. In addition, some freight forwarders can provide subsidiary and mandatory services in regards to the actual movement of the cargo from origin to destination. This may include complicated customs matters, which involve declaring the cargo for legal purposes, acquiring insurance, and collecting necessary documentation regarding the cargo.

Freight forwarders provide logistical services like information technology regarding messaging relay concerning the cargo. The messaging may occur throughout the entire supply chain about stowing, handling, storage, forwarding, and unforeseen issues. The general process between freight forwarder and air carrier beings when an agreement is made concerning the point of origin and destination for the cargo. After which, the freight forwarder will transport the cargo from its holding or storage to the air carrier or designated representative. Any customs or export regulations are handled after the cargo has been forwarded. The freight forwarders main objective is to protect the welfare of its customer. Working closely with air carriers, freight forwarders seek to book space for consignments and prepare cargo for transport by air when all agreements, contracts, or air waybills are completed. Some freight forwarders have warehouses strategically placed often landside located near the local airports for easy access. In some cases, some freight forwarders may have locations allowed on both land and airside (ICAO.int, 2013).

Ground Handling Agents

Ground handling agents are contracted under an agreement for their services provided to either the freight forwarder or air carrier. This situation arises when the air carrier or freight forwarder does not have sufficient capacity to fulfil this particular service in house. Ground handling agents play a key role in the air freight supply chain. Their services

include the facilitation of warehousing prior to and after cargo acceptance, handling, preparation, necessary cargo tagging including mail, loading and unloading, transit, and stowing of the cargo. Ground handling agents must follow specific operational process based on the details provided by the air carrier or freight forwarder regarding the cargo. When the cargo has be cleared for shipment, the ground handling agent will release the shipment to the air carrier as represented in figure 4. Much like the freight forwarders, the ground handling agent's location is crucial for their role in the supply chain. They are generally located on airport premises with access to both airside and landside terminals and in some rare instances they can be located only landside (Morell, 2011).

Air Carrier

The air carrier or aircraft operator is responsible for the actual physical transportation of the cargo via air as shown in figure 4. An agreement is made known as an air waybill between all designated parties connected to the cargo and the air carrier. This agreement binds the air carrier to provide safe and secure transportation of the cargo and mail from point of origin airport to the destination airport. Air carriers may operate and transport cargo by utilizing the belly capacity of passenger aircrafts or by using an all-cargo aircraft. There are many cases in which the different segments of transport may be carried out by road but still handled by the air carrier. These instances are called road feeder services when the cargo remains under the air waybill and segment is provided a flight number but not physically flown (ICAO.int, 2013).

Airport Operator

The airport operator has the responsibility of providing the supply chain with the facilities and security of the overall airport structure as shown in figure 4. The airport operator provides a safe environment which can allow for the movement of passengers and air cargo to move freely. The airport operator is also responsible for handling any incidents regarding any threats related to the air cargo (ICAO.int, 2013).

4 Supplier Relationship Management

This chapter will present a literature review of supplier relationship and its management. This will introduce a definition of supplier relationship management, the different types of relationships, reasoning for supplier relationships, and what business performances

are involved. For the purpose of this section a theoretical model was created by the research as shown below.

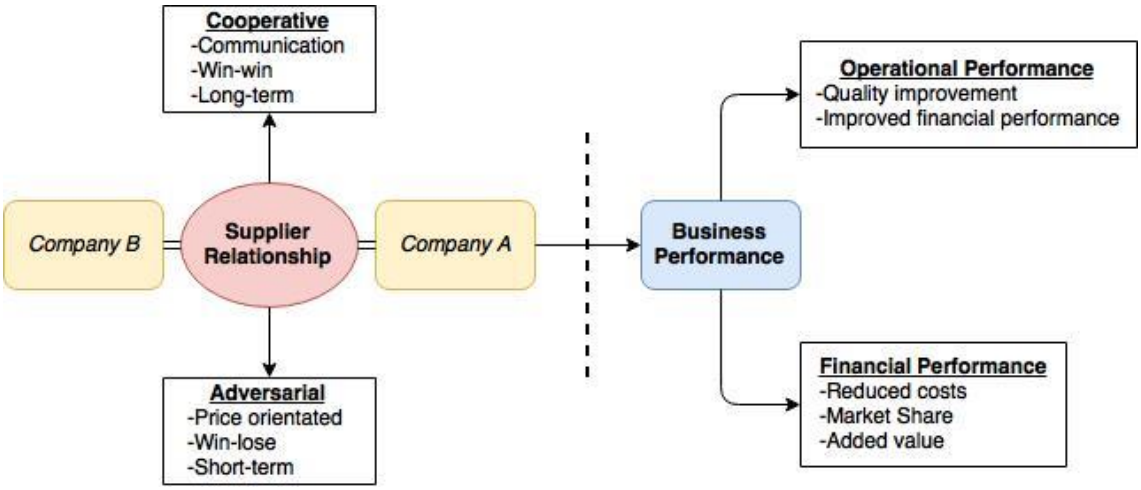


Figure 5. Supplier Relationship in Relation to Business Performance

Figure 5 provides a visual overview of the theory covered relating to the research question proposed in chapter 1. To the left of the horizontal dotted line pertaining to research question 1, the types of supplier relationship were defined either adversarial or cooperative along with the reasoning for each relationship. To the right of the horizontal dotted line pertaining to research question 2, the business performance were separated into two categories being financial or operational performance indicators. These are analysed with the help of the supplier relationship between Company A and Company B in the following chapter.

4.1 SRM Overview & Definition

Supplier relationship management is a relatively new concept emerging over the past few years. Recently, SRM has been perceived as a software tool as many enterprise resource planning systems contain SRM, but it is much deeper than just a software. When SRM is done correctly it becomes a systematic approach for the supply chain and all its contributors which will enrich business performance of suppliers and customers (Hughes & Wadd 2012). The impact of sourcing on corporate strategy has now shifted focus towards building and maintaining relationships with suppliers. Today's business climate raises competitive issue that push organizations to now look for new ways to promote sustainable improvement. With that in mind, a completive advantage is not

necessarily defined for an organization internally but rather it can be achieved and realized through the relationships and connections with external partners. When one organization buys services or products from another, a relationship is created and becomes significant to impact overall customer satisfaction. This encases any form of supply chain management strategy making SMR viable when adding value to the customer (Schuh et al. 2014).

Supplier relationship management deals with the features of supply chain management where all aspects of business relationships occur between companies and their suppliers. SRM entails the business structures and processes that companies use when communicating with suppliers and gives the necessary capabilities when dealing with different types of direct relationships with suppliers (Liker & Choi, 2004). Similarly, Hughes and Wadd (2012) describe SRM as being a business process that will allow for deepening, developing, and maintaining the relationship with suppliers. At present, supplier relationships have become a more and more significant practice for companies due to volatile markets and pressure of competition.

Companies must now focus on sustainability and risk consideration, which in turns means evaluating and nurturing the relationship with key suppliers that can provide knowhow for creating new and innovating products or services. SRM methods and processes have become more progressive giving more focus towards integration and communication with suppliers. This involves building a relationship that promotes cost reductions, product innovation and creates value for the buyer, supplier and end customer. The relationship is best formulated on the basis of a mutual commitment for cooperation and joint success. Therefore, the supplier relationship offers companies the potential for businesses to be built upon the foundation of successful strategic sourcing and purchasing procurement initiatives (Schuh et al. 2014).

4.2 Types of Supplier Relationships

The traditional supplier relationship has two distinct types being the adversarial type and the cooperative type (Hoover 1996). The cooperative type is based on collaboration while the adversarial type is transactional. In the following sections these two types of

relationships are introduced in order to provide clarity as to which relationship is made between the case companies of this research.

The adversarial relationship has been prevalent in using strategies that align suppliers with their expectations in cost reduction. As a result, the modern adversarial relationship is based on the principal of reduced prices on goods and purchased services. Adversarial relationships have three main concepts. The first concept considers the buyer's dependency on multiple suppliers that compete alongside each other for the most competitive price reduction and relying on constant supply of resources. The second concept applies to the buyers expectations as the buyer anticipates that the supplier will not offer a competitive price beyond a specific fixed amount. The third concept is the action of the buyer by adopting an "arm's length" positioning and only working on a short-term commitments and contracts. These concepts are utilized by the buyers in order to achieve a high level of bargaining power when dealing with suppliers (Humphreys et al. 2001).

Since marketplaces are crowded and supplier competition is extremely high, Humphreys et al., (2001) suggest that the overall supposition is that there is little difference between competencies of suppliers to provide any significant added value through products or services. Hence, buyers prefer to avoid any long-term partnerships with suppliers. Subsequently, due to adversarial relationships being more short-term orientated, the development of supplier relationship management is sacrificed for the cost of economic gain. A buyer and supplier in an adversarial relationship setting want to increase self-interest which only has adverse effects on the relationship. This relationship can be categorized then as a win-lose where the buyer and supplier compete for superiority in economic gains. This type of relationship may lead to situations of mistrust and discourage any form of opportunistic behaviour. Humphreys et al. (2001) suggest that this type of relationship is becoming more and more obsolete as suppliers and buyers aim to have a more cooperative relationship.

The cooperative relationship type is in its own respect a polar opposite to that of the adversarial type. The cooperative relationship is categorized as a win-win where both the buyer and supplier profit from a characteristics of a close relationship. The cooperative relationship is becoming increasingly attractive for businesses in different

sectors as the close relationships aid the search for a competitive advantage and strategic market positioning. In comparison to the adversarial relationship, the cooperative relation invests time and resources to help suppliers perform their desired function in the supply chain rather than rely on short-term gains and the advantageous power over one another. Bastl et al. (2012) indicate that the relationship created is one based on regular communications and a kind of open dialogue environment to allow for sharing of related business information or resolve any conflicts. The cooperative nature of the relationship means that buyer and supplier must work together through coordinating joint problem and collective negotiating styles. This will help both parties to achieve high levels of business performance and bring economic benefits over the long-term.

When a buyer enters into a long-term relationship with a supplier this enhances their ability to deliver quality services and products while at the same time reduce the overall cost of the transaction. Similarly, suppliers benefit from the cooperative relationship as the company becomes more competitive and can offer reduced costs in production and operations which may lead to an increase in quality and overall productivity. Long-term relationships with key supplies utilize this win-win style to allow for trust and commitment to grow together with the inclination to share risk cooperatively (Liker & Choi, 2004).

4.3 Reasons for Supplier Relationship

Based on much of the provided theoretical literature it is becoming increasingly clear that focus on supplier relationships is important when identifying the type, effectiveness, and competitive advantage the relationship may provide businesses. Schuh et al. (2014) suggest that businesses must understand different types of relationships with suppliers in order to benefit the entire value of the supply chain. This can benefit both parties gaining access to key resources. Access to resources will come externally and will help benefit the buyer in cost reduction, manufacturing operations, product life cycle, productivity, and improved quality in products or services (Schuh et al. 2014).

Cannon et al (2010) put forward three driving factors that generally influence the relationships orientation with suppliers. First factor has to do with the buyer's perspective asserting that supplier performance will facilitate a closer relationship. The second factor

has to do with the level of trust between buyer and supplier meaning long-term partnership and cost savings. The third and last factor is the supplier's capability to provide the necessary resources for the buyers operations. The buyer-supplier relationship has heavy emphasis on business performance which can help to influence the financial and market performance of either company having positive impacts. Aside from the economic upturn created by supplier relationships, it also impacts other aspects of business such as innovation, technology, and problem solving capabilities.

4.4 Business Performance

Business performance is an intricate model, which makes it rather difficult to outline. Damlin (2003) suggests that the difficulties with business performance lie in its ability to adequately define the concept, which may increase the likelihood that some performance indicators may be contradictory. As a result, different areas of research will utilize different business performance measures. According to Giannakis (2007), business performance and measures are an accumulation of different aspects from the business that can be measured in terms of the performance. Suggested business aspects that deal with performance measures of a company or business can be related to cost, quality, delivery, and flexibility. Schuh et al. (2014) condenses business performance to simply refer to it as any evaluation of any efforts devoted to the success of business aims. To this extent, business performances can be considered as a general term that is used to reflect the success of an organization and its processes. Based on the theoretical literature and observations made by the researcher during meetings and negotiations with both companies, business performance includes financial and operations characteristics. Thus, as a result of supplier relationships financial and operational business performance measures must be clarified.

4.4.1 Operational Performance

The operational performances along any part of the supply chain have significant value. Operational performances created from the buyer-supplier relationships benefit the processes involved through analysis and efficiency. The relationships in themselves create stimulation when partners have a better understanding of joint operations or

processes through the exchange of information and resources. Some of the most common areas in which operational performances seek to monitor are quality, delivery, and costs. As a result, many relationships within the supply chain tend to focus on quality improvements and deficiency rates, reliability of deliverables and lead times (Damlin, 2003).

The buyer's primary concerns lie with the quality of the products or services offered by the suppliers such as a valuable assets most often manifests itself in the buyers own products. If a supplier is capable of providing a reliable service or product, the operational efficiency increases for the buyer. Supplier relationships can provide effective operations in which a monitoring system is needed to provide a source of adequate performance measures. A buyer-supplier relationship based on quality is characterized by the supplier's ability to understand the buyer's productions system. Thus, quality parameters can be controlled and improved through the supplier's knowledge and the relationship established can develop business performance. Lead times are also a great benefit resulting from the supplier relationships. A successful supplier relationship can develop lead times and increase performance. This is especially true when suppliers are included in product development putting forth recommendations about quality. All forms of operational performances have the potential to contribute to the financial performance of both supplier and buyer (Song et al. 2012).

4.4.2 Financial Performance

Financial performance of businesses aims to maximize profits and add value to the company. In many ways financial performance indicators can help investors to understand the visibility of growth, profitability, and market value of a company. Measuring financial performance indicators of suppliers may be complex as the benefits are not recorded based on any financial accounts (Damlin 2003). There are no set of financial ratios specified to be used for measuring the performance of a business. Thus, it is imperative for relationships to devise and assess different angles of financial performance to achieve a better perspective. A general basis to determine financial performance is overall cost of goods and services. It is also considered possible to use the market share of supplier as a financial performance indicator. Market share can be a useful indicator by presenting the number of customers and the quantity purchased.

The market share is equivalent to the company's output in a percentage to the total output for all companies in the market place (Giannakis 2007).

5 Current Supplier Relationship Analysis

This section of the thesis intends to outline the relationship study between Company A and B. The data presented in this section is accredited to the time spent in company by the researcher of this thesis and to the observations and field notes made during meetings and negotiations with both companies A and B. The outline will provide an analysis of the current operational setup and description of the supplier relationship between the case companies A and B. This analysis will present the current performance monitoring system and metrics outlined in the service level agreement between customer (Company A) and service provider (Company B). The service level agreement will briefly be explained in this section to provide the context and reasoning for the performance monitoring implementation.

5.1 Service Level Agreement between Company A and B

There is a service level agreement which outlines the services provided to Company A by Company B at HEL airport. The services offered by Company B involve any operational air cargo handling, management, load planning, and optimization necessary. These processes are explained in detail in upcoming chapters in order to understand the relationship between Company A and B. At an operational level the agreement between the two entities allows to monitor Company B´s performance in accordance with Company A´s performance standards and local monitoring targets. Company A had developed a performance monitoring tool called the Bonu-Malus (BM). The B-M is a tool with the purpose of which is to monitor quality against aviation industry standards and locals Key Performance Indicators (KPI's). During an internship with Company A, the researcher of this thesis was responsible for the management of this B-M tool which included monthly quality analysis.

The Standard Ground Handling Agreement is a contractual agreement that creates a business relationship for an air freight handling services as an air carrier and GHA. The agreement is issued and standardized by IATA. Any organization part of IATA uses this

agreement when creating a contract for any form of ground handling operations. The purpose for SGAH is to explicitly define all operations in detail which all parties involved agree to. The SGHA is the highest contractual level regarding all functionality at airports (IATA.org 2015).

Within the SGHA between companies A and B, Annex B clearly implicates the specifications for actual task to be performed. Annex B includes two appendices including 1. Electronic Data Interchange (EDI) and 2. Service Level Agreement (SLA). For the purpose of this research only the Annex B, part 2 is relevant for the case study. The SLA clearly states in great detail the handling operations performed by Company B on behalf of Company A. The sections relevant for this study from the SLA of companies A and B refer to the handling operation times, service guarantee and target agreement. The handling operation time states in detail the timeline in which Company B must operate. The timeframes will vary depending on the service and product in question. The service guarantee and target agreement outline the performance monitoring tools and quality measurements Company A has implemented. The performance monitoring KPI's most relevant for this study are Company A's operational indicators which are based on C2K monitoring and the local performance indicators. The tool used from performance and quality monitoring is known as the B-M.

5.1.1 Current Performance Monitoring Tool

As previously mentioned, the current performance monitoring tool in use is the Bonus-Malus. Overall performance monitoring is done by Company A monthly. The B-M is a report compiled based on the above mention KPI's in order to provide an analysis of Company B's performance. According to the SLA, set targets for the KPI's in comparison with Company B's actual performance show whether quality is being affected negatively or positively. The main function of the monitoring tool is to provide a monetary figure in EUR based on all collective KPI's against weighted set targets. If the B-M is a positive figure, the EUR sum is then paid by Company A to Company B based on performance. If the B-M is a negative figure, the EUR sum is then paid by Company B to Company A based on performance.

5.2 Processes of GHA

The air freight supply chain is supported by its functionality at airports as described by the roles and responsibilities of each party involved above. At many airports around the world it is common to see multiple GHA service provides in competing for the businesses of different air carriers. The GHA of HEL airport, otherwise known as Company B, provides the transportation of air cargo through different air carriers, including Company A. Company B provides the infrastructures need to support the transportation of tangible goods by air. This service includes the operation of a cargo handling terminal located with access to both air and land side. The terminal is meant to process the air cargo making it ready for shipment prior to transport to the air carrier.

The current air freight supply chain of HEL airport is arranged in a fashion where air carriers, like Company A, are in direct contact with forwarding companies rather than the original shipper of the cargo. This model works in such a way that the forwarding companies become the optimal customer for air carriers and the initial shipper become the optimal customer for the forwarding Company. Moreover, there are instances where these so called integrators are used in which they are in direct contact with the shipper. In this case, all functionality and transportation are handled in house rather than utilizing air carriers. Some of the main integrators of HEL Airport are DHL, UPS, and FedEx.

With the air freight supply chain explained and all relevant parties involved identified, it is now necessary to explain in detail the processes carried out by Company B offered at HEL Airport. These processes involve import and export procedures as an acting ground handling agent at HEL airport. These services are explicitly designed and explained in the service level agreement made between Company A and B and are relevant for the research of this thesis.

As mentioned previously, before any cargo can be admitted to or from the air carrier for transport it needs to undergo different handling processes. These handling processes include 4 key step including: 1. the unloading of cargo from forwarder or shipper, 2. the acceptance of cargo to GHA under IATA guidelines and the standards of the operating air carrier transporting the cargo, 3. The preparation of cargo for transport, and 4. The transit to and from the actual aircraft. These 4 steps function for both import and export

cargo being handled by the GHA and include a number of intricate subordinate actions within each step (Morrell 2011).

In the case of the Company B at HEL airport, step 1 begins when the cargo is unloaded from trucks at the cargo terminal. The time frame of the cargo's arrival to the terminal is paramount for the schedule of the cargo. The schedule may vary depending on the air carrier and is important to maintain as it affects the remaining 3 steps of the handling process. Upon arrival at the cargo terminal, the cargo is recognized by Finnish customs agency that HEL airport will be the point of departure (Tulli.fi, 2017). This happens only when the cargo is recorded to the appropriate system for Company A at which point the cargo is unloaded.

Step 2 is about the cargo acceptance procedure. For Company B, this step begins when the physical cargo is compared to the relevant documents forwarded from the shipper or consignee. The documents significant to any cargo being transported via air are known as Air Waybills (AWB). An AWB is a bill of lading that serves as a receipt for cargo and includes all details of the shipment or shipments included. The details of the AWB define the conditions of the carriage, shipper and consignee, the description of the cargo, weight, volume, pieces, and the intended journey. The AWB is composed of the Master Air Waybill (MAWB) and any multiple House Air Waybills (HAWB) as show in figure 6.

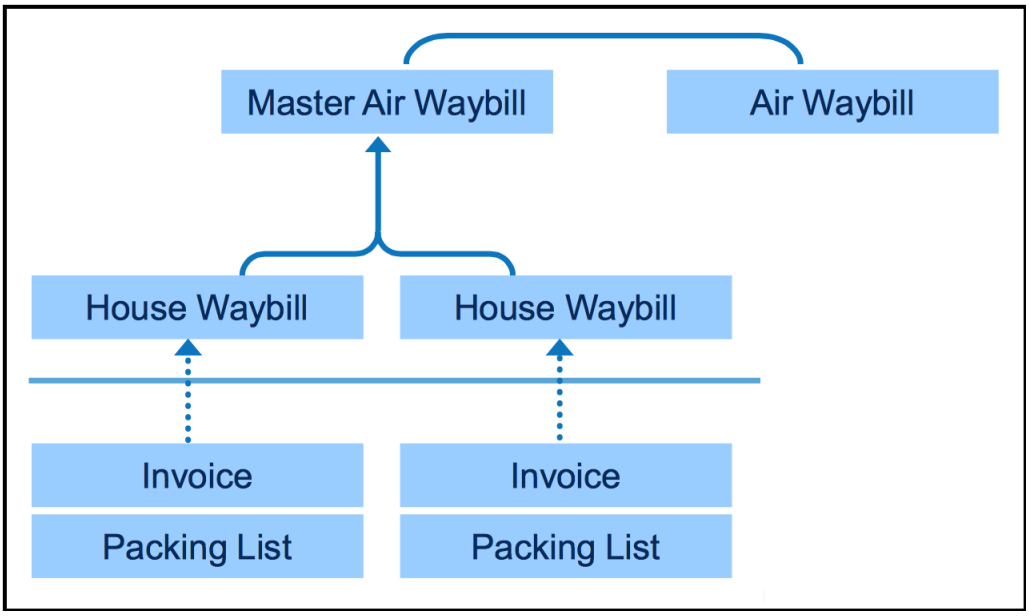


Figure 6. AWB Breakdown Adapted (Logistiikanmaailma.fi, 2008)

The AWB and the MAWB are matching in details while the HAWB can be more than one each containing its own individual details. HAWB's are used to separate shipments and consolidate them under a MAWB during a consolidation in which the routing of multiple shipments are the same. During step 2, GHA's must check and verify all documents and paperwork distributed with the cargo. This verification is an intricate step for the GHA's because it must correlate with IATA standards along with specifications of the air carrier receiving the cargo load. The purpose of the verification is to check whether the physical attributes and details of the cargo match those of the documentation forwarded with the cargo. If there are any deviancies during the acceptance process, the cargo must be stopped as a responsibility of the GHA in order to correct the documentation or the physical aspects of the cargo (Morrell 2011).

The 3rd step for the GHA during the handling process comes after acceptance of the cargo. During this time it is recognized that cargo has successfully been accepted for transport. Before the shipment or shipments can be released to the air carrier it must undergo a security screening. This entails that the cargo is x-ray screened in order to guarantee the security and safety of the shipment. Once the security check has been completed the cargo will await transport to the designated air carrier at the handling terminal warehouse. At this stage the cargo will be assigned to either a unit loading device (ULD) or tagged as bulk or loose cargo. Bulk or loose cargo is exactly what it implies, it is cargo that is secured in the belly of the passenger or cargo air craft loosely. A ULD is used when the cargo is loaded into a specifically designed air container after which the entire container is then loaded on the aircraft. The term ULD may reference to the air craft container or a wooden pallet in which cargo can also be built up on.

The 4th and final step of the handling process for the GHA comes after the cargo is prepared and ready for shipment. It is at this point that the GHA will now transport the cargo to the designated air carrier's air craft. This is achieved by utilizing special airport vehicles that are made for moving ULD and or bulk cargo. Another relevant detail during this step is that the cargo must be delivered to the air carrier's air craft within a certain time period. In case of Company A at HEL airport as an acting carrier, the cargo must be delivered from the GHA approximately one hour before the scheduled time of departure (STD) for the flight. The GHA is responsible for loading the cargo on the air craft which is carried out by ramp handlers.

5.3 Load Planning and Optimization of GHA

Load planning and optimization is another responsibility of the GHA at HEL airport. While the handling processes include the physicality of the cargo, movement and preparation etc.; the purpose of load planning and optimization is to coordinate any estimates of incoming cargo which will eventually be handled by the GHA and forwarded to the air carrier. It is the duty of the GHA to create a plan based on the estimates with the purpose to minimize the amount of unused space of any upcoming flights. The GHA performance in regards to the load planning and optimization of cargo can be monitored through Freight Tonne – Kilometres (FTKO) and Load Factor (LF). Load factoring is a ratio that helps to indicate the total amount offered in terms of the air crafts freight capacity. The ratio is determined by a percentile and represents the factor of load for a particular air craft including taking into consideration its destination. The FTKO offers a broader ratio and indicates the total tonnage of cargo carried on all flights from all routes periodically. This measure is calculated by multiplying the total tonnage of cargo flown by distance travelled. These units of measure are aviation industry standards and are implemented at HEL airport.

5.4 IATA Cargo 2000

Cargo 2000, more commonly known as C2K, was created and established by IATA in 1997. The purpose of its creation was to address the need for monitoring and management of air cargo shipments end to end from shipper to consignee. C2K monitoring and management has a subtle yet prevailing approach helps to create a detailed overview for each shipment. This overview is a route map of the key milestones during transit of cargo such as, planned flight, arrival, and time of pick-up. These milestones are easily defined using basic terminology. The monitoring and completion of C2K milestones are used in the master operating plan (MOP) which is shared between all parties involved with the transit of the shipment as show in figure 7 (IATA.org, 2013).

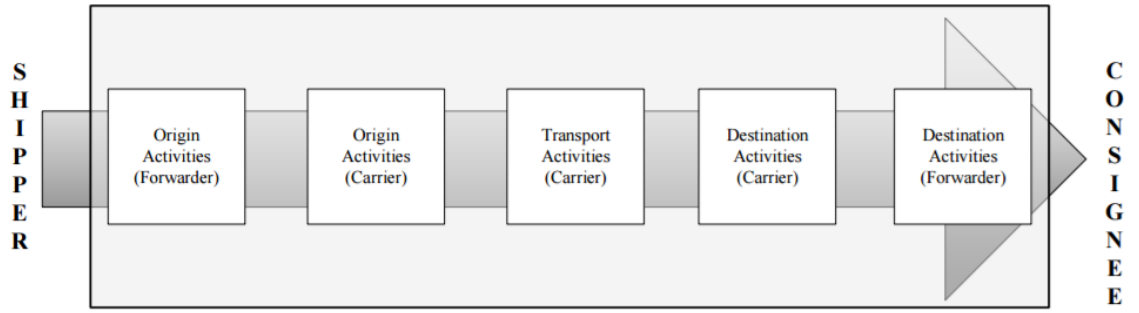


Figure 7. Air Cargo Industry Master Operating Plan (IATA.org, 2013)

The route map for C2K is composed of the master operating plan. The MOP is most relevant for the air carrier when shipments are monitored. The MOP is an intricate supply chain that is formed between shipper and consignee. For the purpose of this study, research will only focus on the MOP that relates to the airport to airport (A2A) transit of cargo in which AWB is concerned. There are 7 milestones in total that make up the MOP relevant for the air carrier and parties involved. At HEL station, it is the responsibility of Company B (GHA) for these milestones as they are the ones relevant in terms of quality benchmarking and export forwarding (Air-cargo-how-it-works.blogspot.de, 2011). The 7 relevant millstones are encased in red and presented in figure 8.

1. **FWB** – The shipment is booked with eh air carrier at which point an electronical air waybill is created by the agent.
2. **RCS** – The physical cargo and documents have been received and accepted by the air carrier or GHA on behalf of the transit air carrier.
3. **DEP** – The cargo and documents have departed airport of origin.
4. **ARR** – The cargo and documents have arrived at airport of destination
5. **RCF** – The cargo has been offloaded and transported to cargo hold at final destination. The cargo and air waybill have been received systematically.
6. **NFD** – The cargo and documents have been notified as ready for pick up to either air carrier or GHA and the customer is aware.
7. **DLV** – The physical cargo and documents have been delivered to the customer, consignee, or forwarder.

Figure 8. Master Operating Plan Milestones Adapted (IATA.org, 2016)

At any point during transit each milestone is susceptible for error, meaning something has gone wrong. This has its consequences, which will affect the following steps and more importantly affect the planned output time of the shipment. Any occurring errors are logged electronically for all parties to see providing full transparency. C2K monitoring is implemented between Company A and B. These units of measurements make it possible to track shipments with great efficiency. This can provide users with a high quality performance report, which can then be utilized to evaluate the performance and lead to any necessary process improvements.

5.5 Operational Performance Indicators of Company A (C2K based)

As an airline carrier, Company A has an obligation to deliver goods as promised to the customer. Company A offers three different products related to cargo transport solutions including:

1. *Standard*- basic economical transport solution for cargo
2. *Express*- reliable cargo transport on short notice
3. *Special*- perishable, temperature sensitive, or valuable cargo

The promise, which is guaranteed to the customer or consignee occurs at the time of availability (TOA) for the cargo. The TOA time is set if the cargo is ready for carriage and RCS is completed before the latest time of acceptance (LAT) show in figure 9.

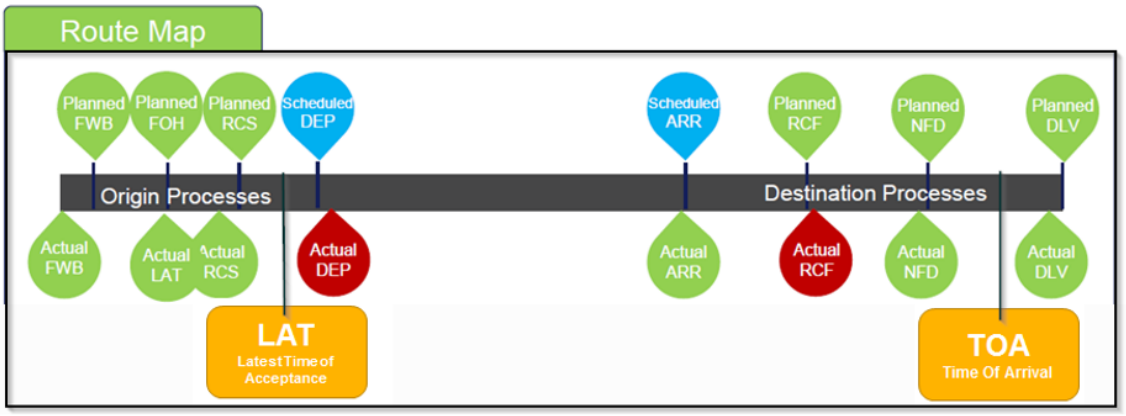


Figure 9. Route Map of C2K Milestones Adapted (IATA.org, 2016)

At HEL airport, Company B is responsible for preforming RCS before LAT or else it is considered a C2K non-compliant case. The LAT is determined based on the type of product chosen by the shipper. While the MOP of a shipment is created when the AWB is issued, it is permissible for the routing of the cargo to be changed and updated. However, this is only allowed before RCS. At the point of RCS, the responsivity of the cargo is then transferred to the airline carrier at which point TOA is now guaranteed to the customer or consignee. If the cargo is notified for delivery after the TOA it is a breach of contract on behalf of the air carrier. This may lead to quality assurance and possible legal issues. The operational performance indicators are KPI's which Company A bases all quality monitoring and management on. As previously mentioned, these KPI's are based on IATA C2K standards. The most relevant and influential operational performance indicators for Company A are:

1. **Flown as Planned (FAP)** – the shipment has flown at or before the last planned flight. The DEP monitors that the cargo has departed from origin station based on the MOP.
2. **Delivered as Promised (NFD)** – the shipment has been notified in full and all time stamps are on time. NFD monitors that cargo was available at the destination station before the time of availability (TOA) is promised to the customer.

These two monitoring indicators help to determine whether the shipment is moving as planned from start to end. These two C2K's performance indicators are generated by

Company A centrally and may be adjusted depending on regional level. As agreed upon in the SLA, the current monthly set target rate is 98% for FAP and 98.5% for NFD.

5.6 Local Performance Indicators of Company A

The local performance indicators are focused around a number of different local protocols. The indicators are based around the export and import handling processes that were described in subsection 5.2 Processes of GHA. The indicators and set target percentages are agreed upon in the SLA and are in compliance with Company A's standards. The local performance indicators are defined by Company A and are only applicable to HEL airport operations. The most relevant and influential local KPI's are: 1. Booking Quality Assurance (BQA), 2. Road Feeder Service (RFS), and 3. Trip-file checks.

Booking Quality Assurance (BQA)

BQA is a monitoring indicator used by Company A which is meant to verify the stated weight of the cargo listed on the AWB compared to the actual weight of the cargo. The BQA must verify that the details of the AWB are correct as it acts a contract for carriage for air carrier. The reasons for the BQA check spot deviations to see if the transport promise can still be fulfilled. The physical dimensions of a shipment will determine if a BQA check is necessary. The physical properties of a shipment must match one of the following criteria: a cargo piece exceeds 150kg, cargo piece(s) exceeds 320cm in length, the entire cargo exceeds 500kg, or the cargo piece(s) exceeds more than 2 cubic meters. BQA quality analysis and monitoring is performed by Company A on a weekly basis.

Road Feeder Service (RFS)

RFS monitoring indicator is used by Company A to track movement messages created by air cargo traveling by road. The purpose of the indicator is to monitor the messaging from Company B's IT system. The messages must be input to the system within 60 minutes after the cargo's departure or arrival. If a message is input after the 60 minute mark, it is considered a monitoring failure and must be clarified by Company B. RFS monitoring and quality analysis is performed by Company A on a daily basis.

Trip-file

Trip-file is a monitoring indicator used by Company A to produce a percentage based on the results of documentations failures. The actual trip-file is process is carried out by Company A weekly, which involves a check of flight documentation, IT messaging, and related documents. The purpose of the Trip-file is to verify that Company B is performing up to IATA and Company A's processual standards.

5.7 Challenges of Current Performance Measurement

The current performance monitoring, known as the B-M, includes daily, weekly, and monthly quality analysis of Company B's performance. This monitoring tool was agreed upon in the SLA during the year 2011. Since late 2015 both companies had been discussing that the current model needed an update. The B-M is a compilation analysis based on the Operational Performance Indicators of Company A described in section 5.5 and the Local Performance Indicators of Company A described in section 5.6. Although the B-M preforms its desired function, it is an outdated platform and all measures and metrics are not part of a centralized structure.

The Operational Performance Indicators are compiled on a weekly basis for analysis by Company A's quality and handling intern. Company A monitors milestones DEP and NFD as KPI's to assess the performance of Company B. The analysis is a case by case investigation which includes the retrieval of information from different data bases between company's A and B in order to determine whether the case is creditable. A creditable case may show that a failed milestone, either DEP or NFD, is not at the fault or expense of Company B. The Local Performance Indicators are monitored daily. BQA and RFS involve analysis of data retrieved from Company A's data bases while the trip-file checks are done manually every third day of the week on location at Company B's facilities. The manual effort in analysis for both the Operational Performance Indicators and Local Performance Indicators is time consuming and only an acute number of people have the ability to perform the work involved.

To summarize, Companies A and B wanted to strengthen strategic positioning at HEL airport through the renewal of their operative SGHA. The last renewal of the agreement was 2011 and it is common to revise it every five years. Both companies agreed that a

performance monitoring update would also accompany the renewal of the former SGHA service level agreement essentially replacing the B-M. The proposed new performance monitoring tool, known as Supplier Quality Sheet (SQS) aims to improve processes and to assess performances accurately and more detailed for the basis of all commercial activities. The new SQS monitoring tool is intended to replace the B-M and also provide statistical data which can then be compared to allow for further analysis of operational performance. The outcome in Helsinki will possible strengthen the business relationship between Company A and Company B in hopes to implement similar projects in other airports worldwide. This is important since monitoring and improving quality has a positive economic effect on both companies.

6 Results and Data Analysis

The purpose of this section is to use the empirical findings presented from the theoretical literature of supplier relationships and the information provided by the companies A and B to answer the research questions. The first research question is answered in two separate sections. The first sections discusses the type of the supplier relationship between Company A and B and the second section discusses the reasons behind the relationship. The second research question presents the business performances between company A and B. In particular, the operational and financial performances indicators are used to determine the effectiveness of the relationship between both companies.

6.1 Type of Supplier Relationship and Reasons for Existence

The supplier relationship management is contingent and classified on the type of relationship established being either adversarial or cooperative. Thus, it is possible to determine the type of relationship established between Company A and Company B based on the characteristics of the relationship. Based on the empirical findings collected, the supplier relationship between companies A and B can be characterized by regular communications and meetings. Also, conflict resolution between companies A and B was carried out together seamlessly and it was recognised that the current relationship has been problem free. Based on these characteristics, the type of relationship formed between companies A and B is cooperative. As Bastl et al. (2012) suggests a cooperative

relationship is based on open communications consisting about relevant business information and conflict resolution.

Based on the partnership between Company A and B, the relationships extends far beyond the extent of HEL airport which suggests a high level of trust from each companies. Cannon et al (2010) advocates that trust is a common attribute for a strong foundation in long-term relationship which are all traits of a cooperative relationship. Based on the analysis of companies A and B current SRM practices, it was discovered that both companies are involved in product innovations and development cooperatively. This suggest that the both companies are in a win-win relationship style (Liker & Choi, 2004). The relationship between Company A and Company B are long term orientated with a win-win style based on trust, thus deeming it's a cooperative relationship.

A prominent reason for the cooperative relationship at HEL airport is the fact that there are only a limited number of suppliers capable of providing Company A with the sufficient ground handling services needed. This coincides with Schuh et al (2014) claims, that SRM is a strategic decision meaning that sustaining a cooperative relationship will reduce the risk of the supply.

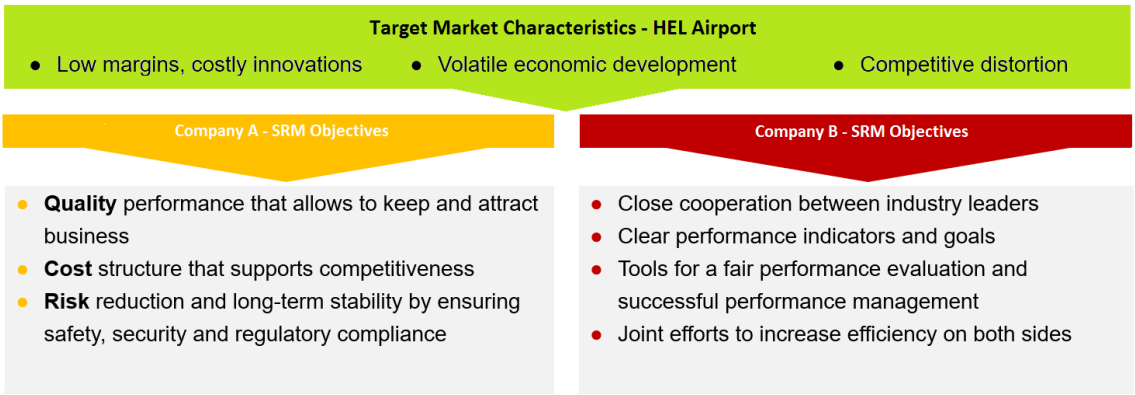


Figure 10. SRM Objectives for Companies A and B

Cannon et al (2010) expresses the need to foster close relationships with suppliers as it can offer expertise and insight when developing new products. This is visually presented in figure 10 showing the objectives of the supplier relationship for each company. The SRM objectives are created by Company A and are based on the relationship with Company B. Company B's objectives are a projection of what Company A offers in terms

of SRM. The objectives themselves are a direct response to the characteristics of the target market characteristics at HEL airport which is presented in the green box. The objectives for each company represents a win-win style (Liker & Choi, 2004) as each objective aims to have a positive impact on business in terms of processual and economic growth.

Figure 11. Company A's SRM Objectives Defined

Company A's SRM objectives are defined in more detail as presented in figure 11. Company A's reasoning for supplier relationship is to improve quality, decrease costs, and eliminate risks. This is in line with Liker & Choi's (2004) view that long-term supplier relationships enhance quality and reduce costs over time. Similarly, Schuh et al. (2014) also claims that cooperative relationships need enhanced quality of materials or services from suppliers. Improved quality from suppliers affects customer satisfaction and can lead to a competitive advantage for the buyer's business. Therefore it can be asserted that Company engages in a cooperative relationship to enhance cost efficiency and provide quality operational excellence. The empirical findings gathered from companies A and B also provided an overview of cost repercussions involved during the evolution of suppliers which is also reason to asset cost efficiency is a major driving factor for the established relationship at HEL airport.

The empirical findings collected during meetings and negotiations between companies A and B highlighted the implementation of a new monitoring system, which was developed as a by-product of the supplier relationship. This provides reasons to believe that the cooperative relationship between Company A and Company B leads to skill and proficiency in product innovations (Schuh et al. 2014). Also, reasoning for the cooperative relationship at HEL airport develops sharing knowledge augmenting both companies and facilitating new technologies. The aviation industry is highly regulated and legislated. Company A and Company B must abide by IATA standards and other protocols, which may also be a reason for a cooperative relationship. However, the empirical findings ruled out the possibility of reasons for cooperative relationship being a result of regulated environments.

6.2 Business Performance as a Result of Supplier Relationship

6.2.1 Operational Performances

According to Damlin (2003) the operational performances are a direct result of relationships within the supply chain allowing for processes to be simplified. Thus, supplier relationships stimulate better understanding of activities, enhanced exchange of information and resources, and reduced operational down-times or product errors. Based on the empirical data gathered from the companies A and B, the cooperative relationship is frequently engaging in open discussion and communications concerning quality and performances of Company B. It was agreed upon mutually by both companies that operational performance monitoring needed improvement. The improvement came in the form a new performance monitoring tool known as the SQS which would replace the B-M. The performance monitoring tool templates have been presented in figures 12 and 13 to show a comparison of significant changes made which affect functionality and design.

Performance Indicator [weighting]	Sub-Indicator	GHA W/H SLA ID#*	To be monitored?*	No of Milestones*	Non-compliant Milestones*	No of GHA credited Milestones*	Actual GHA Compliance	GHA W/H SLA Target Level*	Tolerance Level	Scoring
FAP Export	1.1.1 Standard (B/M yes)	3.1.1 A	Yes				#DIV/0!	98.0%	96.0%	#DIV/0!
	1.1.2 Express (B/M yes)	3.1.1 B	Yes				#DIV/0!	99.0%	97.0%	#DIV/0!
	1.1.3 Specials (B/M yes)	3.1.1 A+B	No				n.a.	99.0%	n.a.	n.a.
FAP Transit	1.1.4 Standard	n.a.	No				n.a.	96.0%	n.a.	n.a.
	1.1.5 Express	n.a.	No				n.a.	98.0%	n.a.	n.a.
	1.1.6 Specials	n.a.	No				n.a.	98.0%	n.a.	n.a.
NFD Import	1.1.7 Standard (B/M yes)	3.1.1 C	Yes				#DIV/0!	99.5%	97.5%	#DIV/0!
	1.1.8 Express (B/M yes)	3.1.1 D	Yes				#DIV/0!	99.5%	97.5%	#DIV/0!
	1.1.9 Specials (B/M yes)	3.1.1 C+D	No				n.a.	99.5%	n.a.	n.a.
* To be completed/checked locally (Column "No of GHA credited Milestones**: Light green, yellow & red fields have to be completed!)									Subtotal	#DIV/0!

Figure 12. SQS KPI Monitoring Tool (New)

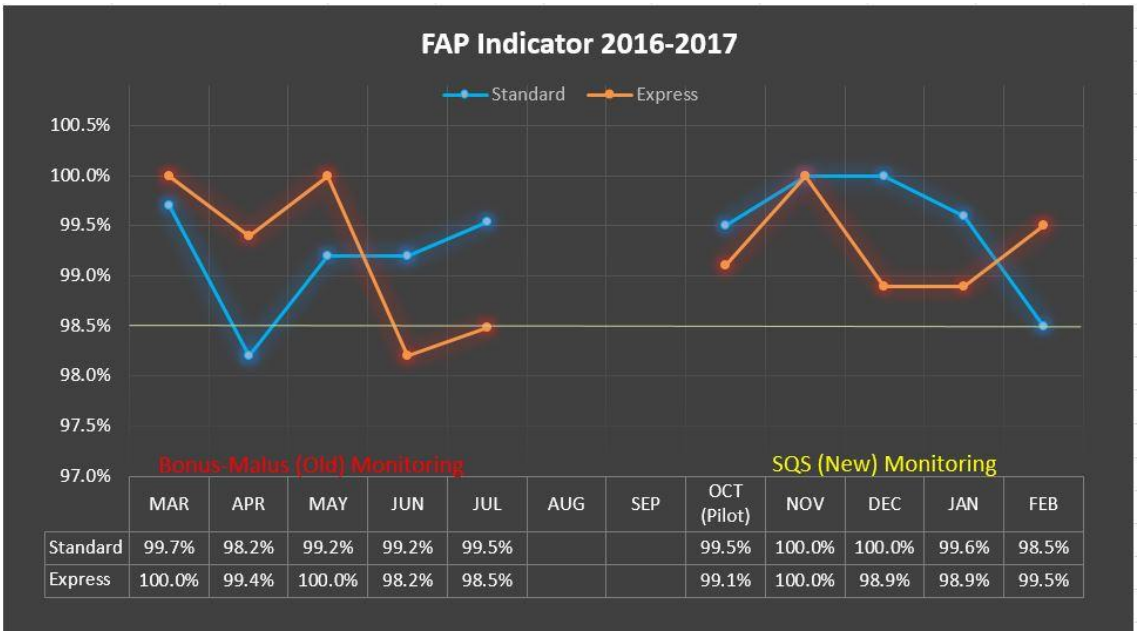
Company A's Operational Performance Indicators								
KPI	Current Performance	Target Value	Total NC's	Nbr of credited Shipments	Adjusted Performance	Deviation to Target Value	Weighting	Deviation weighed Values
DEP Export Standard		97.5%			100.0%	2.5%	20%	0.50%
DEP Export Express		98.5%			100.0%	1.5%	20%	0.30%
DEP Export Specials*		97.5%			100.0%	2.5%	10%	0.25%
NFD Import Standard		98.5%			100.0%	1.5%	20%	0.30%
NFD Import Express		98.5%			100.0%	1.5%	20%	0.30%
NFD Import Specials*		98.5%			100.0%	1.5%	10%	0.15%
							100%	
							TTL deviation KPI's:	1.80%

Figure 13. B-M KPI Monitoring Tool (Old)

A comparison of the SQS monitoring tool (New) to the B-M (Old) will show how operational performances have improved as a result of the cooperative supplier relationship at HEL station. The most relevant KPI's in assessing the quality of a GHA are the FAP and NFD indicators which were defined under section 5.5 of this thesis. FAP monitors export shipments and NFD monitors import shipments both of which directly reflect operational performances of Company B. FAP and NFD is measured monthly by Company A to asses quality and if services levels are in compliance with the SLA. A data set of 12 months was analysed for both FAP and NFD research. Each indicator offered two different product levels, either Standard or Express, which are also clarified under section 5.6 of this thesis.

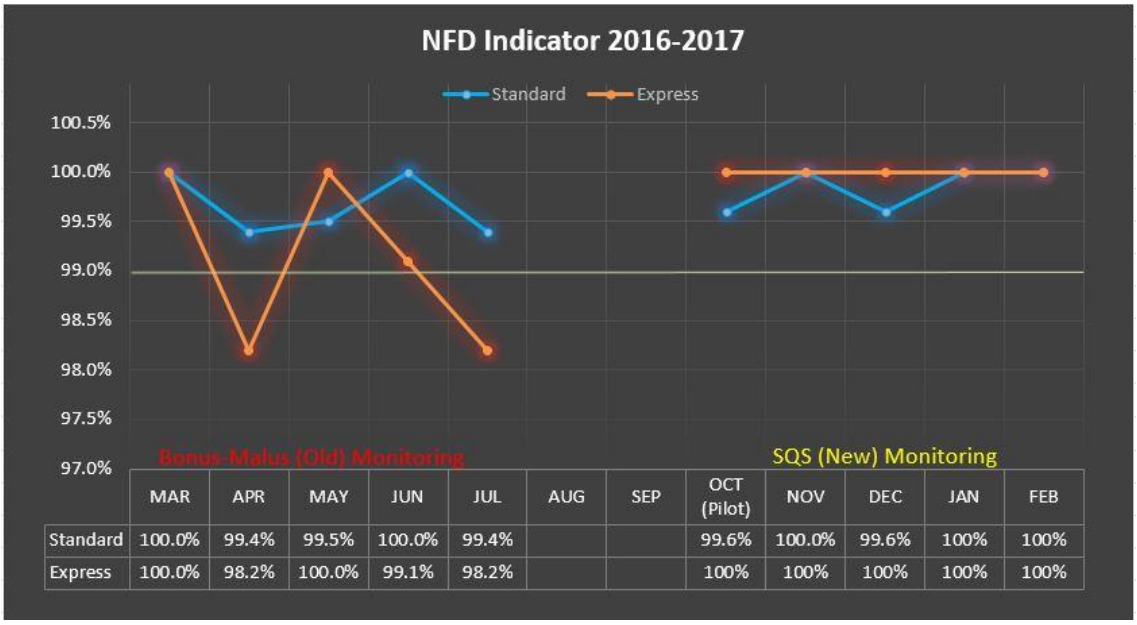
Figure 14 presents the FAP performance indicator spanning over a twelve month period being in March 2016 to February 2017. During the months of March to July 2016 the B-M (old) monitoring tool labelled in red was used. For the months of October 2016 to February 2017 the SQS (new) monitoring tool labelled in yellow was used. Note that

the months of August and September of 2017 were not recorded for monthly analysis as both companies were preparing to transition into the new monitoring system. Two products are showed on the graph as blue represents standard shipments and orange represents express shipments. The yellow line represents the FAP target percentage of 98.5% set by Company A. Standard FAP shipments showed a marginal increase during the SQS monitoring months with no values below target percentage. Express FAP shipments had a dramatic increase during SQS monitoring with months well above target level.



	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT (Pilot)	NOV	DEC	JAN	FEB
Standard	99.7%	98.2%	99.2%	99.2%	99.5%			99.5%	100.0%	100.0%	99.6%	98.5%
Express	100.0%	99.4%	100.0%	98.2%	98.5%			99.1%	100.0%	98.9%	98.9%	99.5%

Figure 14. FAP Performance Indicator



	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT (Pilot)	NOV	DEC	JAN	FEB
Standard	100.0%	99.4%	99.5%	100.0%	99.4%			99.6%	100.0%	99.6%	100%	100%
Express	100.0%	98.2%	100.0%	99.1%	98.2%			100%	100%	100%	100%	100%

Figure 15. NFD Performance Indicator

Figure 15 presents the NFD performance indicators spanning over a twelve month period being in March 2016 to February 2017. Figure 17 is a graph identical to the earlier mentioned FAP indicator in figure 14 meaning that same conditions apply. The only difference is that target percentage is different for NFD. The NFD target percentage is 99% as set by Company A. Standard NFD shipments show minimal changes as in is apparent that both monitoring systems in all month's recorded above target level. Express NFD shipments showed the most improvement since the implementation of the new SQS monitoring system. During the B-M monitoring NFD express shipments were on a slight decline in the beginning of the month of May but since the introduction of the new SQS tool shipments have operated 100% meaning not a single non-compliance case for those months.

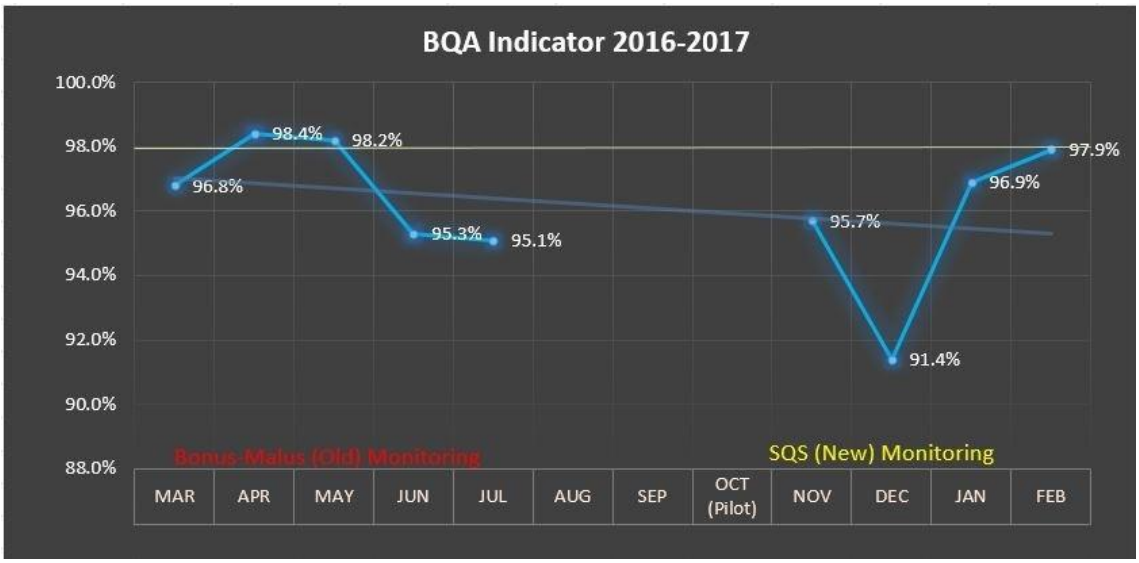


Figure 16. BQA Performance Indicator

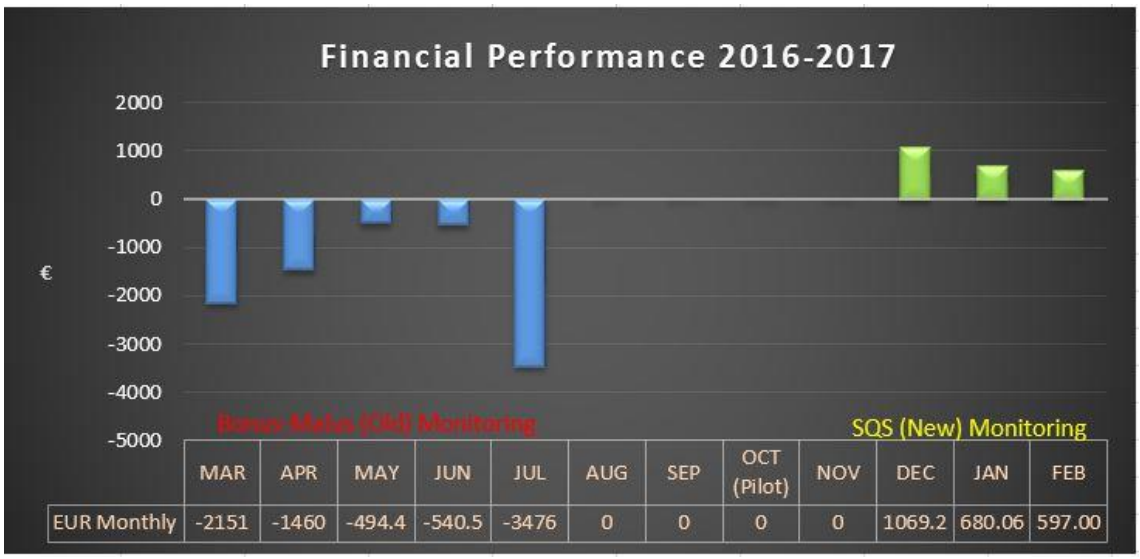
Another relevant operational indicator is the booking quality assurance (BQA) measure which was defined in section 5.6 of this thesis. The BQA indicator represents Company B's performance and capability to monitor and report deviations between the actual physical dimensions of the cargo and the dimensions provided by the shipper/forwarder prior to acceptance and forwarding to Company A's aircraft. Figure 16 follows the same pattern as the FAP and NFD figures present above. The target percentage set by Company A for the BQA indicator is 98%. Based on the figure 19, it is clear to assume that a steady decline in performance. This is presented by the blue trend line that runs in a downward slant throughout all twelve months. There is descending pattern from the month of May 2016 up to February 2017 clearly showing that BQA needs improvement. The fall in BQA may be due to lapses in communication between companies A and B in their IT data interchange system, but the issue is still open for debate.

Based on the empirical findings of the research, it is clear that the monitoring development has had a positive impact on quality for the majority of the operational indicators between companies A and B. This supported by Schuh et al (2014) claims that close relationships with suppliers involves sharing information related to management and product development, which can lead to elevated levels of quality. As a result of the close cooperation and efforts between company A and B, the implementation of the SQS monitoring tool has improved the KPI's responsible for monitoring GHA capabilities FAP and NFD. The local monitoring BQA indicator has not experienced the same positive impact yet but based on the current trend line during SQS monitoring the indicator has

potential. As previously mentioned, the statistical data for FAP and NFD are composed internally at Company A's headquarters which impacts overall consistency and clarity of the data. However, the BQA is a local monitoring indicator in which the statistical data analysed is composed and compared from a number of different data servers from company A and B. This may suggest a lapse in communication either between IT platforms from Company A and B or imply that there is a processual error on behalf of Company B during the actual BQA check.

6.2.2 Financial Performances

Song et al. (2012) advocates that the operational performances can add to the financial drivers of both suppliers and buyers. The empirical findings collected support this assertion that operational efficiency through the cooperative relationship of companies A and B affect both companies financially.



	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT (Pilot)	NOV	DEC	JAN	FEB
EUR Monthly	-2151	-1460	-494.4	-540.5	-3476	0	0	0	0	1069.2	680.06	597.00

Figure 17. Financial Monthly Performance Values (€)

Figure 17 presented above shows the financial performance as a result of the cooperative relationship formed between companies A and B at HEL airport. Figure 18 presents the financial performance during a twelve month period beginning in March 2016 up to February 2017. It also shows how the newly implemented monitoring tool has impacted the relationship financially. Note that for the months of August to November 2016, there are no financial values due to the transition period to the new SQS monitoring tool. No

operational performances were monitored during that time. Financial performances with negative values are coloured blue and positive values are coloured green. As agreed upon in the SLA between company A and B, the maximum deficit is set to -5000.00€ and the maximum adequacy is set to 2000.00€. Based on the data, monthly financial values during the B-M monitoring were negative. Financial values during SQS monitoring began to show an increase. Ultimately, a negative financial performance means that Company B has performed poorly and must pay the amount in repercussions which ultimately affects the products offered by Company A. However, a positive financial performance benefits both companies as customer satisfaction is improved for Company A and Company B receives a performance bonus.

Song et al. (2012) claims support the empirical findings presented in figure 17 as improved service or product quality combined with lower deficiency rates are benefits of a cooperative relationship, which can directly affect end product or service users. The empirical findings also support the assertion that financial business performance for the buyer comes from cooperative relationships as a result of the operational efficiencies. It is fair to assume that cooperative relationship at HEL airport has played a significant part in financial performances impacting both companies.

7 Conclusions and Recommendations

7.1 Implications on the Case Companies

The rapid globalization of markets, stifling completion, and active shareholder participation has pushed organizations to revaluate their means of business operations. Nowadays, emphasis is placed on the management of relationships formed between key suppliers. The notion being that the survival of the organizations in thriving markets is dependent on the relationship that exists between supplier and buyer. The management of any supplier relationship is complex considering both parties interest and opportunistic nature of both suppliers and buyers. The study conducted for this thesis was based on an existing buyer-supplier relationship within in the aviation industry and more specifically the relationship existing at Helsinki, Finland's airport.

The study utilized a case company example to exam the relationship at HEL airport. Company A was an air carrier (buyer) who purchases ground handling services from Company B (supplier). The study intended to identify the type of relationship created between companies A and B and the reasoning behind its establishment and upkeep along with how the relationship has facilitated improved business performances. As a result, the findings were consistent with the research questions and also seemed to reflect on many different sources from literature concerning supplier relationships and supplier relationship management.

After a completion of the analysis and all relevant key points were identified, a final theoretical model was created and applied to highlight the case study. Figure 18 presents the supplier relationship created between companies A and B, which was identified as being a cooperative relationship. Thus, the following theoretical model in practice applies the cooperative relationship to the companies. The reasoning for the relationship between company A and B is encased by the grey arrow. The cooperative relationship is displayed along with its characteristics affecting business performance, which is represented also by a grey arrow. The operational and financial performances of the study are presented.

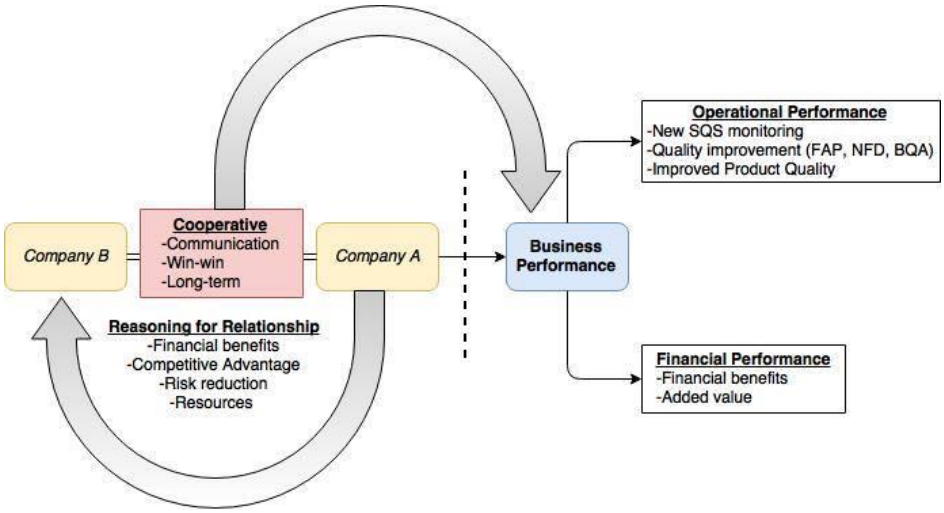


Figure 18. Researcher's Theoretical Model in Practice

Based on the literature review and empirical findings of the research the type of relationships between company A and B can be classified as a cooperative type in order to answer research question 1.

"What type of supplier relationship is formed between Companies A and B and what are the reasoning's for such a relationship? "

The cooperative type is a long-term orientated relationship that implement various mechanism that benefit both companies A and B. Much like any other business, communication is essential for conflict resolution, building trust, and value creation. The findings of the study, which correlate with Bastl et al. (2012) and Cannon et al. (2010), show that maintaining a close relationship with supplier's implements a win-win strategy. This is a particular underlying reason for cooperative relationship creation. The most prevalent reasons for a cooperative based supplier relationship were cost reduction, quality improvements, shared resources, and reduced risks. All reasons are possibly beneficial for establishing a sufficient competitive advantage for either company.

Supplier relationships directly affect business performances creating value for both companies involved. The cooperative supplier relationship encourages knowledge and understating of activities of parties involved to determine the most effective way to maximize profit and minimize costs. To answer the second research question following impacts were identified:

"What ways has the established supplier relationship lead to improved business performance for companies A and B?"

The established relationship at HEL airport identified two areas of business performance improvements being operational and financial performances. Literature findings from Damlin (2003) and Giannakis (2007) support the empirical findings that show the cooperative relationship at HEL airport has had an impacted financial and operational performance's. Operational performances directly affected quality and reliability. Empirical findings supported this when analysing standardized and local key performance indicators. Furthermore, the research conducted with companies A and B displayed the significance of supplier relationship innovation as a new monitoring systems was implemented and assessed. The operational performances lead to cost reduction for Company B and quality improvements for Company A. The financial performance benefits were direct results of the operational performance indicators. The empirical findings suggest that financial improvement is obtainable through quality control and

efficiency within the operational network. Thus, as a result, companies A and B at HEL airport can appreciate operational and financial proficiencies through a more strategic cooperative relationship.

7.2 Implications on Aviation Industry

Based on the findings of the case study, a number of suggestions can be made, which are applicable to the aviation industry and its operators. As previously mentioned, joint ventures and other types of cooperation can lead to improved efficiency and increase customer awareness while fostering competition. Fostering relationships in the aviation industry can help appropriate a cost base that works for that particular market segment. Nonetheless, when considering the general lack of positive economic forces a low cost base will help the aviation industry in its resilience to the rules of the economics much like any other industry.

The relationship between Company A and B provides evidence to show that the buyer-supplier relations can improved operating economics of the business, when focus is applied to internal and external relationships. The implementation of the new monitoring tool displayed positive effects on both quality and revenue for both companies. Thus, evaluating and implementing the best supplier relationship can help spread better practices across the entire aviation industry. Consequently, there a number of issues which arise from the traditional buy and sell relationship between airlines when it is replaced with a cooperative risk-sharing relationship most of which involve labour including process not specific to the aviation industry. However, the upside lies within the potential that exists from the partnership created much like that of companies A and B.

7.3 Reliability and Validity

The data utilized for this case study was collected during a series of different informal and formal meetings between companies A and B along with analysis of company data. The theoretical frameworks used were feasible for the case study, although more in-depth development could facilitate better supplier relationship or procurement practices.

Based on the researcher's previous experience with the company prior to the study it was confirmed that SRM practices and performance measurements needed improvement. Multiple data inputs and sources were utilized to understand the SRM function and needs of the case study. Data sources and tools included: meetings, negotiations, documentation, analysis of current and future performance measures, and observations. A few informal discussions with company A and B leaders provided valuable details and insightful direction of the case study. The analysis of the data was carried out with close consideration of the research questions intend to be studied. The data collection and theatrical background provided evidence of the type of supplier relationship between company A and B and reasons for its preservation. Furthermore, identified key business operational performances that affected quality and revenues for the both companies.

To conclude, if this case study was carried out using a different research method or analysis, the outcomes are very probable to be similar. Although the results of the research was able to provide sufficient answers to the initial research questions, a more thorough analysis over an extended period of time may increase the validity and reliability of the case study. Unfortunately, this was unachievable due to time constraints of the needs expressed by companies A and B at HEL airport. In summary, supplier relationship management is an extremely relevant emerging topic for research, which involves many parties and process from the supply chain applicable to any industry. The research involved for this case study provides a decent overview of SRM practices, theories, and performance monitoring systems but is impartially limited still considering the topic as a whole.

7.4 Suggestions for Further Research

The study presented a new innovative method to monitoring performance indicators between companies A and B at HEL Airport. The cooperative relationship extends further then the scope of HEL station which would lead to assume that an airport to airport comparison would be beneficial. The comparison could work to evaluate supplier relationships by station, which can then be further more segmented into a regional comparisons of suppliers. This would onset different legalities, socio, and economic impacts depending on region but would help to further share information and resources.

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